



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/189,768	11/10/1998	SADAYUKI NARUSAWA	51270-245585	5853

7590 02/23/2005

ROGER R WISE
PILLSBURY MADISON & SUTRO
725 SOUTH FIGUEROA STREET
SUITE 1200
LOS ANGELES, CA 900175443

EXAMINER

LAO, LUN S

ART UNIT	PAPER NUMBER
----------	--------------

2643

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/189,768

Applicant(s)

NARUSAWA ET AL.

Examiner

Lun-See Lao

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8,24-28,30-33,36-38 and 1221 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8,12-21,24-28,30-33 and 36-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. This action is in response to applicant's amendment filed on 11-12-2004. Claims 1-8, 12-21, 24-28, 30-33 and 36-38 are pending. Claims 1, 2, 12, 13, 15, 21, and 24-26 have been amended and claim 9-11, 22-23, 29, 34-35 and 39 have been canceled.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-2, 12-13, 15 and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The driven "the audio device can operate independently if the computer is not operational" (see specification pages 2-3 and pages 4-6) was not supported in the further detail in the specification nor any of the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2643

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Divon (US PAT 6,301,513) in view of Glick (US PAT 5,283,819).

Regarding claim 1, Divon teaches an audio system comprising:

an audio device (see fig. 1a, 14);

a computer (see fig.1b, 16) for creating computer audio data (such as speech or spoken book) and control data for operating the audio device (see col.2 line 63-col.3 line 51); and

a data transmission bus for linking (see fig.1b, 26) the audio device and the computer together to transmit data there between (see col.6 line 23-47),

wherein said computer (see fig.1b, 16) has an output for outputting the computer audio data and the control data to the audio device via the data transmission bus (see col.2 line 63-col.3 line 51),

and Wherein said audio device (see fig.1a, 14 such as a car audio system), including the first system portion (radio receiver) and the second system portion (see fig.1a, 12, (10, cassette)), and said computer (see fig.1b, 16) are located in separate physical housings, the audio device (see fig.1a, 14) can operate independently if the computer is not operational (see col.5 line 11-col.6 line 8);

and wherein said audio device includes;

Art Unit: 2643

a first system portion (see fig.1a, 14, such as car audio system includes a radio receiver and see col.11 line 38-45) for processing audio source audio data that is provided by an audio source other than the computer, second system portion (see figs.1a, 1b, 10) for processing the computer audio data created by computer (see col.5 line 11-col.6 line 8), but Devon does not teach a mixing circuit for performing mixing of the audio source audio data and the computer audio data, which are respectively processed by the first and the second sound system portions.

However, Glick teaches a mixing circuit for performing mixing (70) of the audio source audio data and the computer audio data, which are respectively processed by the first and the second sound system portions (see col.5 line 25-col.6 line 43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teaching of Glick into Devon to provide computing technology with multimedia and telecommunication technologies for a wide variety of entertainment purposes.

Regarding claim 2, Timis teaches an audio system comprising:

an audio device (see fig.1a, 14);

a computer (see fig.1b, 16) for creating computer audio data (such as speech or spoken book) and control data for operating the audio device (see col.2 line 63-col.3 line 51); and

data transmission means (see fig.1b,26) for linking the audio device (see fig.1a, 14) and the computer (see fig.1b, 16) together to transmit data there between (see col.6 lines 25-47),

wherein said computer (see fig.1b, 16) has an output for outputting the computer audio data and the control data to the audio device via the data transmission means (26), and Wherein said audio device (see fig.1a, 14), including the first system portion (see fig.1a, 14 such as car audio system includes a radio receiver) and the second system portion (12 for cassette), and said computer are located in separate physical housings (see figs.1a, 1b), the audio device can operate independently if the computer is not operational (see col.2 line 63-col.3 line51);

and wherein said audio device includes

a first system portion (see fig.1a, 14 and see abstract) for performing signal processing on the computer audio data from the computer, or for performing the signal processing on audio source audio data of an audio source different from the computer audio data, or the audio source audio data selectively provided by one of a plurality of audio sources different from the computer(see col.2 line 63-col.3 line51); But Divon does not clearly teach a second system portion (see fig.1, 1) for performing simple signal processing, which is simple as compared with the signal processing of the first system portion, on the computer audio data created by the computer, and a mixing circuit for performing mixing of the audio source audio data and the computes audio data, which are respectively processed by the first and second system portions and a switch for turning off the mixing of the mixing circuit when the first system portion performs the signal processing selectively on the computer audio data of the computer.

However, Glick teaches a second system portion (see fig.1, 20) for performing simple signal processing, which is simple as compared with the signal processing of the

Art Unit: 2643

first system portion, on the computer audio data created by the computer(sound synthesizer 33 which generates different sound by the computer itself, see col.12 lines 26-41), mixing circuit (70) for performing mixing of the audio source audio data and the computes audio data, which are respectively processed by the first and second system portions (see col.5 line 25-col.6 line 43) and switch for turning off (control by program) the mixing of the mixing circuit when the first system portion performs the signal processing selectively on the computer audio data of the computer (see col.5 line 25-col.6 line 43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teaching of Glick into Divon to provide computing technology with multimedia and telecommunication technologies for a wide variety of entertainment purposes.

Regarding claim 24, Divon teaches an audio system, comprising:

a computer (see fig.1b, 16);

an audio device (see fig.1a, 14);

a data communications bus (see fig. 1b, 26) for allowing communications between the computer (se fig.1b, 16) and the audio device (see fig.1a, 14)),

wherein said computer (see fig.1b, 16, laptop computer) includes a control data processing unit (such as cpu and dsp) for outputting control data for controlling the audio device and for outputting audio data to the audio device via the data communications bus based on the operation of an operation panel (such as a microsoft window 98 for cd-rom) (see col.5 line 58-col.6 line 22),

Art Unit: 2643

a display unit (see fig.1b, 16) for displaying an operation panel (such as displaying a Microsoft window 98 for operation system) for controlling the audio device (see col.2 line 63-col.3 line51),

a serial bus (see fig.1b, 26) interface for receiving information regarding operation of the operation panel (such as Microsoft window 98) via the data communications means as the control data, thus providing the control data to the operational panel (see col.5 line 10-col.6 line 8); and

an audio data processing unit (such as cpu and dsp from the laptop computer) for outputting the audio data to the audio device via the data communications means (col.5 line 11-col.6 line 10); and said computer (see fig.1b, 16) are located in independent and separate devices, and the audio device (see fig.1a, 14) can operate independently if the computer is not operational (see col.5 line 11-col.6 line 8); but Divon does not teach clearly a audio device includes mixing circuit for mixing the audio data supplied from the computer together with other audio data given from a different audio source, wherein said audio device, including the mixing circuit.

However, Glick teaches an audio device includes mixing means (see fig.1 (70)) for mixing the audio data (such as hard disk or internal cd) supplied from the computer together with other audio data given from a different audio source (12) (see col.5 line 25-col.6 line 43); and wherein said audio device, including the mixing circuit (70 and see col.13 lines 40-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teaching of Glicki into Divon to provide to

Art Unit: 2643

combine computing technology with multimedia and telecommunication technologies for a wide variety of entertainment purposes.

6. Claims 12, 18-20, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Divon (US PAT 6,301,513) in view of Timis (US PAT 5,792,971).

Regarding claim 12, Divon teaches an audio system, comprising:

an audio device for producing first audio data (see fig.1a, 14, such as audio system) in connection with at least one audio source (see abstract),

external serial bus means (see fig.1b, 26); and

a personal computer (fig.1b,16) for creating second audio data and control data(see col.5 line 11-col.6 line 8); and

wherein the audio device (see fig.1a, 14) is in a device separate from the personal computer (see fig.1b, 16), the audio device can operate independently if the computer is not operational (see col.5 line 11-col.6 line 8); but Divon does not teach the audio device performs mixing between the first audio data and the second audio data, which is transmitted thereto via the external serial bus, on the basis of the control data transmitted from the personal computer, so that speaker produces sound based on mixing results.

However, Timis teaches the audio device performs mixing between the first audio data (see fig.1, 180) and the second audio data (1 computer such as audio filed on the hard disk), which is transmitted thereto via the external serial bus, on the basis of the

Art Unit: 2643

control data transmitted from the personal computer, so that speaker produces sound based on mixing results (see col.5 line 57-col.6 line22).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teaching of Timis in to Divon to provide a method editing digital audio information with music-like characteristics base on comparison of a first set of control codes associated with the source program and a second set of control codes preselected to present a desired editorial change.

Regarding claims 18-20, Timis teaches that the audio source corresponds to a tuner or a recording media (hard drive (see col.5 lines 55-67)); and audio system wherein the personal computer (see fig.1, 1) uses graphical user interface (GUI) (see fig.3, 182) for creation of the control data for controlling operation of the audio device and the signal processing corresponds to a graphic equalizer process and/or a sound field control process (see col.6 line 63-col.7 line33).

Regarding claim 30, Timis teaches the audio system of the audio data performs digital mixing of the first audio data (from internal cd (19)) and the second audio data (from audio file which be stored on hard disk) (see col.13 line 5-60).

7. Claims 3-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Divon (US PAT 6,301,513) as modified by Glick (US PAT. 5,283,819) as applied to claims 1-2 above, and further in view of Timis (US PAT 5,792,971).

Regarding claims 3-4, Divon teaches that the audio system of the computer further includes

display unit (see fig.1b, 16) for a display unit an operation panel for operating the audio device,

a serial bus interface (see fig.1b, 26) for outputting the control data to an audio device via the data transmission bus on the basis of operation of the operation panel (see col.5 line 11-col.6 line 10), and

an audio data processing unit (see fig.1b, 16 laptop computer microprocessor) for outputting the computer audio data to the audio device via the data transmission bus (see col.5 line 11-col.6 line 10), but Divon does not teach a control data processing unit (see fig.1,1) for receiving information regarding operation made by the audio device via the data transmission means as the control data so as to reflect the control data in content of the operation panel.

However, Timis teaches a control data processing unit (see fig.1,1) for receiving information regarding operation made by the audio device via the data transmission means as the control data so as to reflect the control data in content of the operation panel (see figs4-10 and col.8 line 35-col.9 line 46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teaching of Timis into Divon and Glick to provide a method editing digital audio information with music-like characteristics base on comparison of a first set of control codes associated with the source program and a second set of control codes preselected to present a desired editorial change.

Regarding claims 5-8, Divon teaches that the audio system wherein the data transmission bus (see fig.1b, 26) is configured by a single serial bus cable and its interface.

8. Claims 27-28, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Divon (US PAT 6,301,513) as modified by Glick (US PAT. 5,283,819) as applied to claims 1-2 and 24 above, and further in view of Heyl (US PAT 5,774,567).

Regarding claims 27-28, Divon and Glick not clearly teach the audio system of the data transmission means transmits digital data between the audio device and the computer, and the mixing means is a digital mixing circuit that performs digital mixing of the audio source audio data and the computer audio data.

However, Heyl teaches the audio system of the data transmission means transmits digital data between the audio device and the computer (see fig.5 (int-cd and ext-cd)), and the mixing means is a digital mixing circuit (adder see fig.3, 110, 120, 122, 124) that performs digital mixing of the audio source audio data and the computer audio data (see col.6 line 7-col.7 line 20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teaching of Heyl into Divon and Glick to provide digital sound signals, independently adjusting the level of each of the digital sound signals for each of a plurality of output lines, and mixing the adjusted digital sound signals that correspond to each of the plurality of output lines.

Regarding claim 36, Divon and Glick do not teach clearly the audio system of the data communications bus allows digital communications between the computer and

Art Unit: 2643

the audio device, and the mixing circuit is a digital mixing circuit for mixing the audio data supplied from the audio device and the second audio device supplied from the computer.

However, Heyl teaches the audio system of the data communications bus (see fig.5 (int-cd and ext-cd)) allows digital communications between the computer and the audio device, and the mixing circuit is a digital mixing circuit for mixing the audio data supplied from the audio device and the second audio device supplied from the computer (see col.6 line 8-col.7 line19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teaching of Heyl into Divon and Glick to provide digital sound signals, independently adjusting the level of each of the digital sound signals for each of a plurality of output lines, and mixing the adjusted digital sound signals that correspond to each of the plurality of output lines.

9. Claims 15 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Divon (US PAT 6,301,513) in view of Heyl (US PAT 5,774,567).

Regarding claim 15, Divon teaches an audio system, comprising:

an audio device (see fig.1b, 14 such as an audio system) for producing first audio data in connection with at least one audio source (abstract)

an external serial bus (see fig.1b, 26), and

Art Unit: 2643

a computer (see fig.1b, 16) for creating computer audio data (such as speech or spoken book) and control data for operating the audio device (see col.2 line 63-col.3 line 51); and

and Wherein said audio device (see fig.1a, 14 such as a car audio system), is located in a device (see fig.1a, 12, (10, cassette)) separate from the computer (see fig.1b, 16), the audio device (see fig.1a, 14) can operate independently if the computer is not operational (see col.5 line 11-col.6 line 8); but Divon does not teach the selecting unit for selecting one of the first audio data and the second audio data, a signal processing block for performing signal processing on output of the selecting unit and an adjustment unit for performing adjustment on the second audio data with respect to sampling parameters digital mixing circuit for performing digital mixing between output of the signal processing block and output of the adjustment unit, and digital-to-analog converter for converting a result of the digital mixing to analog signals, and speakers for producing the sound based on the analog signals.

However, Heyl teaches the selecting unit (see fig.3, 110-116) for selecting one of the first audio data and the second audio data, a signal processing block for performing signal processing on output of the selecting unit an adjustment unit (see fig.3, 110,112,114) for performing adjustment on the second audio data with respect to sampling parameters digital mixing circuit (adder, 118,120,122,124) for performing digital mixing (118, 120, 122, 124) between output of the signal processing block and output of the adjustment unit (110,112,114,116), and digital-to-analog converter for

Art Unit: 2643

converting a result of the digital mixing to analog signals, and speakers for producing the sound based on the analog signals (see col.4 line 18-col.5 line 12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teaching of Heyl into Divon to provide digital sound signals, independently adjusting the level of each of the digital sound signals for each of a plurality of output lines, and mixing the adjusted digital sound signals that correspond to each of the plurality of output lines.

Regarding claim 32, Divon teaches the audio system of the external serial bus (see fig.1b, 26) transmits the second audio data and the control data digitally(see col.5 line 11-col.6 line 10).

10. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Divon (US PAT 6,301,513) as modified by Timis (US PAT. 5,792,971) as applied to claim 12 above and further in view of Fuchu (US PAT 6,314,326).

Regarding claims 16-17, Divon and Timis fails to teach that the external serial bus means corresponds to a universal serial bus; and the external serial bus corresponds to an IEEE 1394 serial bus.

However, Fuchu teaches that an audio system of the external serial bus means corresponds to a universal serial bus; and the external serial bus corresponds to an IEEE 1394 serial bus (see col.7 line 38-col.8 line 65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teaching of Fuchu into Divon and Timis to

Art Unit: 2643

provide a visual interpretation of how a signal is being processed, to control with high resolution and accuracy, and to be able to return to successful characteristics and parameters as a starting point for new application.

11. Claims 13-14 and 21, 31, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Divon (US PAT 6,301,513) in view of Silfvast (US PAT 5,524,060) and Timis (US PAT. 5,792,971).

Regarding claim 13, Divon teaches an audio system, comprising:

an audio device (see fig.1b, 14 such as an audio system) for producing first audio data in connection with at least one audio source (abstract)

an external serial bus (see fig.1b, 26), and

a computer (see fig.1b, 16) for creating computer audio data (such as speech or spoken book) and control data for operating the audio device (see col.2 line 63-col.3 line 51); and

Wherein said audio device (see fig.1a, 14 such as a car audio system), is located in a device (see fig.1a, 12, (10, cassette)) separate from the computer (see fig.1b, 16), the audio device (see fig.1a, 14) can operate independently if the computer is not operational (see col.5 line 11-col.6 line 8); but Divon does not teach the selecting unit for selecting one of the first audio data and the second audio data, which is transmitted thereto via the external serial bus, signal processing block for performing signal processing on output of the selecting unit, a first digital-to-analog converter for converting output of the signal processing block to first analog signals, and an analog

Art Unit: 2643

mixing circuit for performing analog mixing between the first analog signals and a second analog signals, whereby speaker produces sound based on the result of the analog mixing.

However, Silfvast teaches that the selecting unit for selecting (see fig.5, switch 143) one of the first audio data and the second audio data, which is transmitted thereto via the external serial bus (57), signal processing block for performing (DSP 129) signal processing on output of the selecting unit, a first digital-to-analog converter for converting (DAC 147) output of the signal processing block to first analog signals, and an analog mixing circuit for performing analog mixing (VCA 125) between the first analog signals and a second analog signals, whereby speaker (output / speaker) produces sound based on the result of the analog mixing (fig. 8). See col. 4, line 63 - col. 5, line 67; col. 6, lines 6-19; col. 9, lines 1-35; col. 12, line 54 – col. 13, line 59).

While Divon teaches that audio input includes multiple input lines from a variety of sources (col. 1b, 14 and see abstract), and illustrates in detail one particular input line of such audio input and the processing thereof, Divon does not teach that the associated second digital-to-analog converter for converting audio data from the personal computer to second analog signals.

However, Timis teaches an audio system with a variety of audio input sources, one of which is a personal computer (music workstation) which created second audio data (such as, audio source file be stored on a hard disk for editing) and produces digital audio data (output from 204) which is then converted to analog format (D/A converter 160) (col. 6, line 64 – col. 7, line 9).

Therefore, it would have been obvious to allow the personal computer of Divon to be an audio input source to produce the second audio data and include a second digital-to-analog conversion means for converting the second audio data from the PC to second analog signals. It would have been obvious to combine the teachings of Divon and Timis because this would have provided improved standarization (MIDI standard) of the communications between the devices of the audio system of Divon (Timis, col. 1, lines 46-57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teaching of Silfvast in to Divon to provide a system to generate an output audio signal be selectively varying gain applied to an input audio signal.

Regarding claim 14, Silfvast teaches the audio device further comprises switch means for disconnecting (switches 137, 143) the second digital-to-analog converter from the analog mixing means when the selection means selects the second audio data (col. 13, lines 6-24).

Regarding claim 21, it is covered by claim 13. Note the equivalence of audio device audio data / first audio data, and computer audio data / second audio data. Divon as modified by Silfvast and Timis further teaches output means for outputting (Timis, sound output device 162), inherently data transmission bus to allow communication between the computer and the audio device. Note the discussion of claim 13 for a motivation to combine.

Art Unit: 2643

Regarding claim 31, Silfvast teaches the audio system of the external serial bus (see fig.5 (serial link 57,60)) transmits the second audio data and the control data digitally (see col.9 line 25-35).

Regarding claim 33, Silfvast teaches the audio system of the data transmission bus transmits the computer (such as audio file be stored on a hard disk by headwear) audio data and the control data digitally to the audio device (see fig.5,59 and 51 and col.9 line 25-35).

12. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over of Glick (US PAT 5,283,819) in view of DeVitt (US PAT. 5,212,733).

Regarding claim 25, Glick teaches a control method for an audio device, comprising:

creating a graphic user interface for controlling the audio device to allow selection of an audio source with respect to an audio device (inputs 28, 32 or 72, col. 6, lines 29-43) and to allow mixing (mixer 70) of audio data of the selected audio source (inputs 28, 32 or 72) together with other audio data created by a computer (input from synthesizer 33, col. 12, lines 26-41) (see col. 34, line 22 - col.35, line 7); outputting control data to the audio device based on operation of the graphical user interface (selectable outputs, col. 6, lines 29-43); receiving information regarding operation of the graphical user interface as the control data, and providing the control data to the graphical user interface (see col.34 line 22-col.35 line 7); and outputting the audio data to the audio device (speaker), but Glick does not clearly teach the GUI allows the

Art Unit: 2643

controlling of the audio device by user of a plurality of operational panels displayed on a screen of a display.

However, DeVitt teaches the GUI allows the controlling of the audio device by user of a plurality of operational panels displayed on a screen of a display (see figs. 5A,5B and col.5 lines 19-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of DeVitt in to Glicki to provide a computer system, the controls are displayed on the screen of the computer as they might appear on the mixing board.

Regarding claim 26, Glick teaches a program code storage device, comprising:
a machine-readable storage medium; and machine-readable program code, stored on the machine-readable storage medium, the machine-readable program code having instructions to create a graphic user interface for controlling the audio device, to allow selection of an audio source with respect to the audio device (inputs 28, 32 or 72, col. 6, lines 29-43), and to allow mixing (mixer 70) of audio data of the selected audio source (inputs 28, 32 or 72) together with other audio data created by a computer (input from synthesizer 33, col. 12, lines 26-41) (see col. 34, line 22 - col.35, line 7);

output control data to the audio device based on operation of the graphic user interface (selectable outputs, col. 6, lines 29-43);

receive information regarding operation of the graphic user interface as the control data, and provide the control data to the graphic user interface (col.35 line 16- col.36 line 10); and output the audio data to the audio device (speakers),

Art Unit: 2643

but Glick does not clearly teach the GUI allows the controlling of the audio device by user of a plurality of operational panels displayed on a screen of a display.

However, DeVitt teaches the GUI allows the controlling of the audio device by user of a plurality of operational panels displayed on a screen of a display (see figs. 5A,5B and col.5 lines 19-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of DeVitt in to Glicki to provide a computer system, the controls are displayed on the screen of the computer as they might appear on the mixing board.

13. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Divon et al.(US PAT 6,301,513) in view of Glick (US PAT 5,283,819).

Regarding claim 37, Divon teaches an audio system comprising,
an audio device (see fig.23a (14));
a computer (512) for creating computer audio data (by connected to the
information center via a communication link) and control data for operating the audio
device (14); and

a data transmission bus for linking (by wireless remote) the audio device (14) and
the computer together to transmit data there between, wherein said computer has an
output for outputting the computer audio data and the control data to the audio device
via the data transmission bus (see col.16 line 59-col.17 line 67),

and wherein said audio device (14) includes first system portion for processing audio source audio data that is provided by a tuner unit integrated in the audio device (14), a second system portion for processing the computer audio data created by the computer (512), and wherein said audio device (14), including the first system portion and the second system portion, and said computer are located in separate devices, the separate devices being capable of operating independently (see fig.23a and see col.2 line 63-col.3 line53). But Divon does not clearly teach a mixing circuit for performing mixing of the audio source audio data from the tuner unit and the computer audio data, which are respectively processed by the first and second sound system portions.

However, Glick teaches a mixing circuit (see fig.1, 70) for performing mixing of the audio source audio data from the tuner unit and the computer audio data, which are respectively processed by the first and second sound system portions (see col.5 line 25-col.6 line 43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teaching of Glick into Divon to provide computing technology with multimedia and telecommunication technologies for a wide variety of entertainment purposes.

14. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Divon (US PAT 6,301,513) in view of Heyl (US PAT 5,774,567).

Regarding claim 38 Divon teaches an audio system, comprising:

an audio device (see fig.1a, 14, such as a car audio system) for producing first audio data in connection with at least one audio source,

an external serial bus (see fig.1b, 26)); and

a personal computer (see fig.1b, 16), for creating second audio data (by connected to the information center via a communication link) and control data,

wherein the audio device (fig.1a) is located in a device separate from the computer, and includes a tuner unit (radio receiver) as a first audio source for producing the first audio data (see col.5 line 11-col.6 line 8 and col.col.11 lines 38-45), but Divon does not clearly teach a selecting unit for selecting one of the first audio data and the second audio data, a signal processing block for performing signal processing on output of the selecting unit, an adjusting unit for performing adjustment on the second audio data with respect to sampling parameters, a digital mixing circuit for performing digital mixing between output of the signal processing block and output of the adjustment device, and a digital-to-analog converter for converting result of the digital mixing to analog signals, and speakers for producing the sound based on the analog signals.

However, Heyl teaches a selecting unit (see fig.3, 110, 112,114,116) for selecting one of the first audio data and the second audio data, a signal processing block for performing signal processing on output of the selecting unit, an adjusting unit (110-116) for performing adjustment on the second audio data with respect to sampling parameters, a digital mixing circuit (adder, 118-124) for performing digital mixing between output of the signal processing block and output of the adjustment.device, and a digital-to-analog converter for converting result of the digital mixing to analog signals,

Art Unit: 2643

and speakers for producing the sound based on the analog signals (see col.4 line 18- col.5 line 12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teaching of Heyl into Divon to provide digital sound signals, independently adjusting the level of each of the digital sound signals for each of a plurality of output lines, and mixing the adjusted digital sound signals that correspond to each of the plurality of output lines.

Response to Arguments

15. Applicant's arguments filed 11-12-2004 have been considered but are moot in view of the new grounds of rejection.

Conclusion

16. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao, Lun-See whose telephone number is (703) 305-2259. The examiner can normally be reached on Monday-Friday from 8:00 to 6:30.

Art Unit: 2643

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached on (703) 305-4708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (703) 306-0377.

Lao, Lun-See
Patent Examiner
US Patent and Trademark Office
Crystal Park 2
(703305-2259)


DUC NGUYEN
PRIMARY EXAMINER